give, the other to receive fire; and ſo it proceeds through both ſets, but ſo quick as to be in a manner inſtantaneous. In he colliſion they ſhake off and drop their water, which repreſents rain.

35. Thus when ſea and land clouds would paſs at too great a diſtance for the flaſh, they are attracted towards each other till within that diſtance; for the ſphere of electrical attraction is far beyond the diſtance of flaſhing.

36. When a great number of clouds from the ſea meet a number of clouds raiſed from the land, the electrical flaſhes appear to ſtrike in different parts; and as the clouds are joſtled and mixed by the winds, or brought near by the electrical attraction, they continue to give and receive flaſh after flaſh, till the electrical fire is equally diffuſed.

37. When the gun-barrel (in electrical experiments) has but little electrical fire in it, you muſt approach it very near with your knuckle, before you can draw a ſpark. Give it more fire, and it will give a ſpark at a greater diſtance. Two gun-barrels united, and as highly electrified, will give a ſpark at a ſtill greater diſtance. But if two gun-barrels electrified will ſtrike at two inches diſtance, and make a loud ſnap, to what a great diſtance may 10,000 acres of electrified cloud ſtrike and give its fire, and how loud muſt be that crack!

38. It is a common thing to ſee clouds at different heights paſſing different ways, which ſhews different currents of air, one under the other. As the air between the

tropics

tropics is rarified by the ſun, it riſes, the denſer northern and ſouthern air preſſing into its place. The air ſo rarified and forced up, paſſes northward and ſouthward, and muſt deſcend in the polar regions, if it has no opportunity before, that the circulation may be carried on.

39. As currents of air, with the clouds therein, paſs different ways, 'tis eaſy to conceive how the clouds, paſſing over each other, may attract each other, and ſo come near enough for the electrical ſtroke. And alſo how electrical clouds may be carried within land very far from the ſea, before they have an opportunity to ſtrike.

40. When the air, with its vapours raiſed from the ocean between the tropics, comes to deſcend in the polar regions, and to be in contact with the vapours ariſing there, the electrical fire they brought begins to be communicated, and is ſeen in clear nights, being firſt viſible where 'tis firſt in motion, that is, where the contact begins, or in the moſt northern part; from thence the ſtreams of light ſeem to ſhoot ſoutherly, even up to the zenith of northern countries. But tho' the light ſeems to ſhoot from the north ſoutherly, the progreſs of the fire is really from the ſouth northerly, its motion beginning in the north being the reaſon that 'tis there firſt ſeen.

For the electrical fire is never viſible but when in motion, and leaping from body to body, or from particle to particle thro' the air. When it paſſes thro' denſe bodies 'tis unſeen. When a wire makes part of the circle, in the exploſion of the electrical phial, the fire, though in great

quantity,

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